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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/007,019	01/14/1998	ERIC C. ANDERSON	04860PO686C2	4416

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EXAMINER
LAO, SUE X

ART UNIT	PAPER NUMBER
2126	9

DATE MAILED: 09/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary	Application No. 09/007,019	Applicant(s) Anderson, et al
	Examiner S. Lao	Art Unit 2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ___3___ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Jun 30, 2003* _____.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-4, 6-19, and 56-63* _____ is/are pending in the application.

    4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-4, 6-19, and 56-63* _____ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some* c) ☐ None of:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

4) ☐ Interview Summary (PTO-413) Paper No(s). _____

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other:

DETAILED ACTION

1.   Claims 1-4, 6-19, 56-63 are pending. This action is in response to the amendment filed 6/30/2003. Applicant has amended claims 1-3, 7-10, 12, 14-19, 56-63.

2.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3.   The non-statutory double patenting rejection, whether of the obviousness-type or non-obviousness-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel,* 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornum,* 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi,* 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman,* 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(b) and © may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78(d).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4.   Claims 1-4, 6-19, 56-63 are rejected under the judicially created doctrine of obviousness - type double patenting as being unpatentable over claims 2-5 of U.S. Patent No. 5,448,735 in view of Frankel et al (U. S. Pat. 5,283,900). For example, the skip value/count as recited in claims 1, 9, 10, 16-19 and 57 of the present application is met by the skipcount value of claim 2 of U.S. Patent No. 5,448,735, terminating of claims 9 and 18 of the present application is met by terminating of claim 3 of U.S. Patent No. 5,448,735,

and modifying of claims 7, 8, 14, 15, 59 and 60 of the present application is met by changing of claim 4 of U.S. Patent No. 5,448,735. However, claims 2-5 of U.S. Patent No. 5,448,735 do not teach that a module includes a DSP data structure, which is taught by Frankel wherein each task being scheduled includes a DSP data structure (low level objects, col. 2, lines 10-28; col. 8, line 17 - col. 9, line 4).

5.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. 112, first paragraph, as failing to adequately teach the claimed limitation "modifying the skip value in each of said modules by a module indicated by the skip value" as recited in claim 60.

In the application as filed, there does not appear to be any detailed descriptions or disclosure of modifying the skip value in each of the modules by a module indicated by the skip value. At best, applicant discloses that a skip value can be modified either by the module or by the host. See application as filed, paragraph bridging pages 31 and 32. Applicant fails to disclose modifying the skip value *by a module indicated by the skip value*.

Claim 60 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant recites the limitation "modifying the skip value in each of said modules by a module indicated by the skip value" in claim 60. There does not appear to be a written description of the claimed limitation in the application as filed, for the reasons set forth in the objection to the specification.

6.   Claims 10-15, 17, 57-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hira et al (U. S. Pat. 4,954,948) in view of Frankel et al (U. S. Pat. 5,283,900).

As to claims 10, 17 and 57, Hira teaches (variable COUNT) first set of executable modules (first task 40, second task 50, ..., task 60) sequentially associated with one another (ordered), executing a first module (execute first task 40), determining (36) a skip value associated with (assigned, col. 7, lines 56-57) the first module (COUNT is equal to 1), proceeding to execute a subsequent module (task with its task number equal to COUNT) indicated by said skip value (COUNT being N) associated with a currently executed module (COUNT 1 corresponds to task 40, col. 7, lines 56-57). See col. 3, line 55 - col. 4, line 29, col. 7, lines 56-57.

As to the skip value indicating a module to execute subsequent to execution of the first module, this is met by Hira in that the skip value (COUNT) being N (>2) indicates, subsequent to execution of the first module (task 40), the module to execute is the task whose task number is equal to N. (Col. 4, lines 9-29).

Hira also teaches skipping any modules between the currently executed module and the subsequent module in that tasks whose task numbers are between 2 to N-1 are not executed, ie, skipped, when task N is executed after task 1. Col. 4, lines 9-29.

While Hira teaches the scheduling/tasks are real-time scheduling/tasks (vehicle control, col. 7, line 65 - col. 8, line 5), Hira does not teach that each module comprises at least one DSP data structure.

Frankel teaches scheduling real-time modules/tasks, wherein each task/module includes at least one DSP data structure (low level objects) (col. 6, line 45 - col. 7, line 48; col. 8, line 17 - col. 9, line 4). Given the teaching of Frankel, it would have been obvious to include at least one DSP data structure into each module of Hira. In so doing, both programming and operating efficiency would have been improved. (Frankel, col. 2, lines 28-35).

As to claims 11, 12, 63, Hira teaches integer N (1), skip to N+1th module (2nd task). Assigning N to be less than zero to indicate a termination would have been obvious since

Hira associates integers>0 with valid executable tasks (first task, second task, Kth task) and accordingly integers<0 would have been associated with invalid/non-executable tasks, which would have resulted in a termination of execution.

As to claims 13, 58, Hira teaches a datum associated with (variable COUNT).

As to claims 14, 15, 59, 60, 62, Hira teaches performing skip action (COUNT is equal to K, col. 7, lines 36-37), created by previous iteration (incrementing), modified by a module associated with (executing task increments COUNT to indicate the next task to be executed), modified by a host associated with (COUNT initialized by microprocessor, transmitted by bus). See col. 5, lines 10-12; col. 7, lines 1-3; col. 3, lines 61-64; col. 6, lines 35-54.

As to claim 61, Hira teaches second sequence and second sequence becoming the first sequence / executing in that the system of Hira is a multi-tasking system which includes multiple tasks and control is passed from one task to another.

7.   Applicant's arguments filed 6/30/2003 have been fully considered but they are not persuasive.

Applicant argued that (1) the COUNT variable in Hira is incremented by 1 each time and each task is executed in the ordered series, whereas as claimed one or more subsequent modules may be skipped in the execution order based on the skip value. (Remarks, page 9, 2nd paragraph).

The examiner respectfully disagrees. As to (1), one or more subsequent tasks in Hira may be skipped depending on the value of COUNT. Hira compares the value of COUNT with each task number before execution. Only when the COUNT value equals the task number of a particular task, this task is executed. For example, when COUNT is not equal to 2 but equal to N, task N, rather than task 2, is executed. See Hira, col. 4, lines 16-29. In other words, task 2 and all the tasks up to task N-1, are not executed, ie, skipped. Executing the immediately following task, such as task 2 after task 1, is one, but not the only one, scenario in Hira. Further, the claim language only requires skipping *any* number of modules between the currently executed module and the subsequent module but does

not specify the range of the number of modules to be skipped. When such a number is zero, the immediately following task is executed after the currently executed task is finished, e.g., task 2 is executed after task 1.

Applicant further argued that (2) Hira does not teach applicant's skip value that is associated with a particular executable module because the COUNT value in Hira is global to all the tasks, and claims 1-4, 7(6)-8(9), 16, 18 and 19 require the skip value is stored in the module. (Remarks, page 9, 3rd paragraph, page 10, 2nd paragraph).

The examiner's response is as follows. While independent claims 1, 9, 16, 18 and 19 require that the skip value is stored in the module, other independent claims, ie, claims 10, 17 and 57 do not require such storage. Claims 10, 17 and 57 only require that the skip count/value is associated with the module. Regardless of where these values are stored in Hira (globally or locally), the skip values / COUNT values of Hira are associated with the tasks because they are located and used in the same system and these values determine whether/when the respective tasks are executed, therefore, meeting the broad limitation 'associated with' as claimed.

Applicant further argued that (3) the COUNT value in Hira is only incremented *after* the currently executed task is terminated and thus does not indicate the next task to execute. (Remarks, page 9, last paragraph).

The examiner respectfully disagrees. First, when the skip count/value is incremented is not recited in the claims. See each and every pending claims. Thus, incrementing the skip count/value after the currently executed task is terminated is not precluded by the claim language. Second, a skip count / COUNT in Hira indicates the next task to execute because only the task whose task number equals the COUNT value is executed next after the currently executed task is terminated. See discussion of claim 10 for detail.

For these reasons, applicant's arguments are not persuasive.

8.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue Lao whose telephone number is (703) 305-9657. A voice mail service is also available at this number. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-9051 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Sue Lao
August 19, 2003